Management Alternatives

Early harvest of alfalfa can be effective in controlling economic populations. When harvesting, remember the following rules:

Clean harvest whole fields.

Green-chopping a portion of the field, delaying full harvest, is a poor management practice.

Chemical control is sometimes necessary when economic populations occur early in the cutting

Clean harvest whole fields to eliminate harborage sites.

Replant the following year with a PLH resistant alfalfa variety.

Implementation

Treat only fields with a canopy adequate for spray reception.

Clean harvest whole fields to eliminate harborage sites.

Replant with a PLH resistant alfalfa variety.

Document all management actions taken.

Reevaluation

Recheck fields after harvest to determine population status.

New York State Integrated Pest Management Program

We develop sustainable ways to manage pests and help people to use methods that minimize environmental, health, and economic risks.

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Find more information about IPM for Field Crops at:
nysipm.cornell.edu/agriculture/livestock-and-field-crops

Potato Leafhopper on Alfalfa

Management Guide

NEW YORK STATE Integrated Pest Management PROGRAM

Cornell University Cooperative Extension

Identification

Adults are bright lime green and can fly.

Nymphs are yellow-green and cannot fly.

Potato Leafhopper (PLH) adults overwinter in the south then travel to New York on spring storms.

PLH migrate back to southern overwintering sites in the fall.

Females lay their eggs in alfalfa stems, leaf petioles and leaf veins.

Each PLH generation lives approximately 28 days. There may be more than one generation per season.

The greater the heat, the faster PLH populations develop.

Both PLH adults and nymphs can cause damage.

Damage symptoms include "V"-shaped yellow patches on tips of leaves and possibly stunting of the plant.

Economic losses occur from reduction of % crude protein. Excessive PLH feeding may also reduce dry matter yield and weaken the plants' ability to overwinter.

Dont' wait to sample till you see damage—by then, yield loss can't be recovered.

Potato leafhopper adult. Photo: NYS IPM Staff.

Sampling

Sampling should occur from late May (Memorial Day) until early September.

New seedings are at relatively greater risk to PLH injury than established stands.

Fields should be sampled every 7 days.

Use a 15"-diameter sweep net and the sequential sampling plan below.

Each time the net passes in front of you is considered one sweep. Ten sweeps = one set.

Potato leafhopper damage to alfalfa. Photo: NYS IPM Staff.

Analysis

Shorter alfalfa (less leaf surface area) is at greater risk for PLH injury.

Early harvest of alfalfa can be effective in controlling economic populations.

Action thresholds for new seedings may be reduced under conditions of severe stress such as drought.

Chemical control is sometimes necessary when economic populations occur early in the cutting cycle. Consult the current issue of the Cornell Guide for Integrated Field Crop Management for possible insecticide options and management considerations.

If field is at threshold and rain is expected in 24-36 hours, delay management action and resample after the storm. PLH populations may have been reduced.

Sequential Sampling Card for Potato Leafhopper																				
# of Sets	1		2		3		4		5		6		7		8		9		10	
No Treat or Treat	N	T	N	T	N	T	N	T	N	T	N	T	N	T	N	T	N	T	N	T
<3"					2	9	4	11	5	13	7	15	9	16	11	18	13	20	15	22
3 - 6"					9	20	14	25	18	30	23	35	28	40	33	45	38	49	43	54
7 - 10"					19	41	29	50	39	60	49	70	59	80	69	90	79	100	89	110
>10"					44	75	64	95	84	115	104	135	124	155	144	175	164	195	184	215
Field Counts																				
Running Totals																				

N = No management needed at this time.

T = Management needed as soon as possible.